

Application No: 10/810,019

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IN THE CLAIMS**RECEIVED
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Please amend the claims as follows:

1. (currently amended) An electrochemical device, comprising:
an electrolyte including a polysiloxane having a backbone that includes terminal
silicons and non-terminal silicons,
~~the backbone including~~ one or more terminal silicons linked to at least one side chain
that includes a carbonate moiety,
a portion of the silicons being linked to a side chain that includes a poly(alkylene
oxide) moiety.
2. (canceled)
3. (previously presented) The device of claim 1, wherein the carbonate moiety is a cyclic
carbonate moiety.
4. (currently amended) The device of claim 1, wherein at least one of the terminal silicons is
linked to the side chain that includes the carbonate moiety a second one and another of the
terminal silicons is one of the silicons that is linked to the ~~at least one~~ side chain that includes
the a poly(alkylene oxide) moiety.
5. (currently amended) The device of claim 4, wherein an organic spacer is positioned
between the poly(alkylene oxide) moiety and the ~~backbone~~ second one of the terminal
silicons.
- 6-8. (canceled)
9. (previously presented) The device of claim 1, wherein each terminal silicon is linked to at
least one side chain that includes the carbonate moiety.

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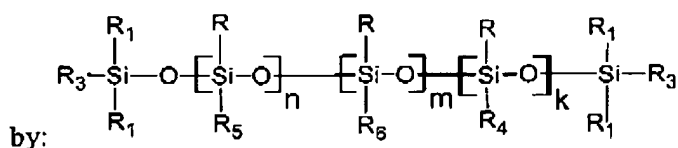
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10. (previously presented) The device of claim 9, wherein each non-terminal silicon is linked to at least one side chain that includes a poly(alkylene oxide) moiety.

11. (canceled)

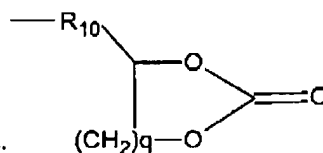
12. (previously presented) The device of claim 1, wherein the at least one side chain includes an oxygen linked to a silicon on the backbone.

13. (previously presented) The device of claim 1, wherein the polysiloxane is represented



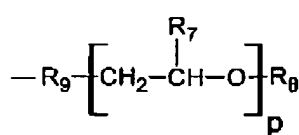
where R is alkyl or aryl; R₁ is alkyl or aryl;

at least one of the R_3 is represented by:

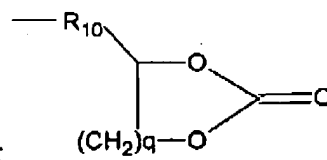


and the other

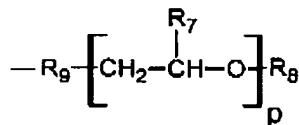
R₃ is represented by:



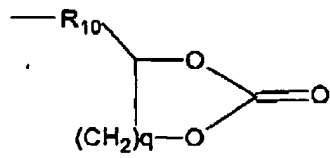
or



R₄ is a cross link that links the polysiloxane backbone to another polysiloxane backbone;



R₅ is represented by:



R₆ is represented by:

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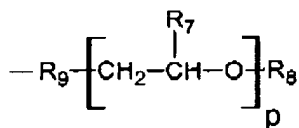
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R_7 is hydrogen; alkyl or aryl; R_8 is alkyl or aryl; R_9 is oxygen or an organic spacer; R_{10} is an oxygen or an organic spacer; k is greater than or equal to 0; p is 3 to 20; q is 1 to 2; m is greater than or equal to 0 and n is 2 to 25.

14. (previously presented) The device of claim 13, wherein a ratio of $n:m$ is in a range of 10:1 to 100:1.

15. (canceled)

16. (previously presented) The device of claim 13, wherein at least one R_3 is represented



by:

17. (previously presented) The device of claim 16, wherein R_9 is an organic spacer.

18. (canceled)

19. (previously presented) The device of claim 13, wherein at least one R_3 has a different structure from another R_3 .

20. (previously presented) The device of claim 13, wherein each R_3 has a different structure from each R_5 and from each R_6 .

21. (previously presented) The device of claim 1, wherein the average molecular weight for the polysiloxane is less than or equal to 3000 g/mole.

22. (previously presented) The device of claim 1, wherein the electrolyte includes lithium ions, and wherein a $[O]/[Li]$ ratio is 5 to 50, $[O]$ being the molar concentration of the active oxygens in the electrolyte and $[Li]$ being the molar concentration of the lithium ions in the electrolyte.

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23. (previously presented) The device of claim 1, wherein the electrolyte is a liquid.

24. (previously presented) The device of claim 1, wherein the electrolyte is a solid.

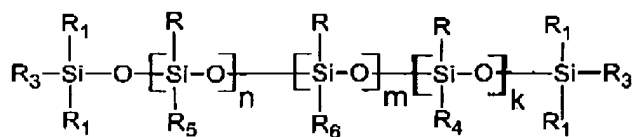
25. (canceled)

26. (previously presented) The device of claim 1, wherein the polysiloxane is a member of an interpenetrating network.

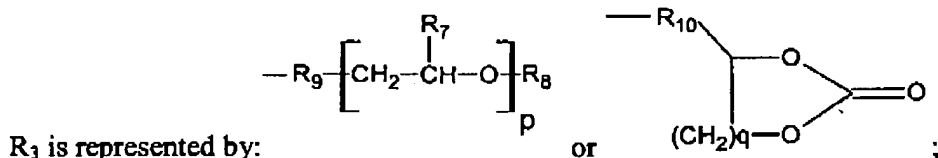
27. (previously presented) The device of claim 1, wherein the electrolyte has a conductivity better than 1.0×10^{-4} S/cm at 25 °C.

28-54. (canceled)

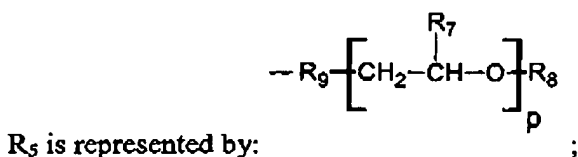
55. (previously presented) An electrochemical device, comprising:
an electrolyte including a polysiloxane represented by:



where R is alkyl or aryl; R₁ is alkyl or aryl;

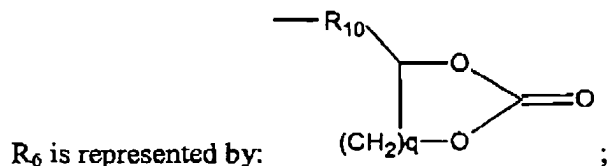


R₄ is a cross link that links the polysiloxane backbone to another polysiloxane backbone;



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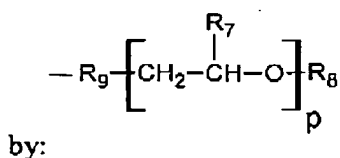
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R_7 is hydrogen; alkyl or aryl; R_8 is alkyl or aryl; R_9 is oxygen or an organic spacer; R_{10} is an oxygen or an organic spacer; k is greater than or equal to 0; p is 3 to 20; q is 1 to 2; m is greater than or equal to 0 and n is 2 to 25.

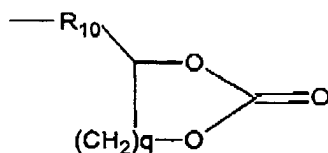
56. (previously presented) The device of claim 55, wherein a ratio of $n:m$ is in a range of 10:1 to 100:1.

57. (previously presented) The device of claim 55, wherein at least one R_3 is represented



58. (previously presented) The device of claim 57, wherein R_9 is an organic spacer.

59. (previously presented) The device of claim 55, wherein at least one R_3 is represented by:



60. (previously presented) The device of claim 55, wherein at least one R_3 has a different structure from another R_3 .

61. (previously presented) The device of claim 55, wherein each R_3 has a different structure from each R_5 and from each R_6 .

62. (new) The device of claim 1, wherein the portion of the silicons being linked to the side chain that includes the poly(alkylene oxide) moiety excludes the one or more terminal

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silicons that are linked to the at least one side chain that includes the carbonate moiety.